REMARKS

Applicant respectfully requests further examination and reconsideration in view of the arguments set forth fully below. Claims 1-16, 18-21 and 23 were previously pending in this Application. Within the Office Action, Claims 1-16, 18-21 and 23 have been rejected. Accordingly, Claims 1-16, 18-21 and 23 are now pending in the application.

Non-admission of Prior Art

It is specifically noted within the Response to Arguments section that Applicant's failure to traverse the Official Notice(s) taken in the previous action is viewed as admission to prior art. The Applicant respectfully submits that the Applicant did not admit to any references cited in the Official Notice(s) as prior art. The Applicant's respectful disagreements to rejections should be reflected as traversals of these rejections. Accordingly, the Applicant respectfully objects to the characterization of the Official Notice(s) as prior art or even an admission of prior art.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 1, 2, 4-9, 11 and 13-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,658,231 to Nakatsuyama et al. (hereinafter "Nakatsuyama") in view of U.S. Patent No. 6,271,893 to Kawaguchi (hereinafter "Kawaguchi") and U.S. Patent No. 6,990,655 to Miner (hereinafter "Miner"). The Applicant respectfully disagrees.

Nakatsuyama teaches a receiver for user-demand information and entertainment system using wide area digital broadcast. Nakatsuyama teaches that the information system provides selected information to individual users through a receiver 40. Program data is broadcast to the receiver 40 according to a program data signal 36. Index data is receiver specific information and includes a receiver identifier, as well as time and tuner information, which is used to receive, download and store the user's selected program. [Nakatsuyama, col. 5, lines 59-61] Nakatsuyama further teaches that the time and channel components identify the appropriate channel and time to which the receiver tunes to receive the index data associated with the receiver's identifier, allowing the receiver to operate in a low power mode. [Nakatsuyama, col. 7, lines 32-39] Nakatsuyama also teaches that the low power mode is achieved by earlier sending time information, via the index data, which allows the receiver to operate in low power mode

until the appropriate time. However, as is noted on page 6 of the Office Action, *Nakatsuyama does not teach a **wake-up switch***. Further, *no where does Nakatsuyama teach a **wake-up sensor** which operates the wake-up switch **in direct response to a wake-up instruction***.

Kawaguchi teaches a digital television broadcasting system. Kawaguchi teaches that a broadcasting system 1 includes a digital TV transmitter 2 for transmitting a transport stream from a satellite space station 3 to a multiplicity of digital TV receivers 4. [Kawaguchi, col. 3, lines 30-43, Figure 1] Kawaguchi also teaches a second transmission media 5 other than the satellite 3 to inform the TV receivers 4 of irregular broadcasts. [Kawaguchi, col. 3, lines 30-43, Figure 1] Kawaguchi teaches that the second transmission media 5 may be any transmission media which is other than the broadcasting satellite 3 and which causes the power consumption in each TV receiver 4 during waiting for a communication from the earth station 2 to be less than the power consumption in each TV receiver 4 during receiving the program information without using program contents. [Kawaguchi, col. 3, lines 43-50] Kawaguchi teaches maintaining an alteration time list 340 and at each TV receiver 4, an update time list. [Kawaguchi, col. 7, lines 6-23] Kawaguchi teaches that at the update time, the switch 231 is turned on. [Kawaguchi, col. 7, lines 24-39, Figure 7A] *Kawaguchi does not teach a **wake-up sensor** which operates a **wake-up switch in direct response to a wake-up instruction***. Instead, Kawaguchi teaches that the switch 231 is turned on at the update time. Furthermore, *Kawaguchi does not teach a means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition.*

Miner is directed to a low-powered communication system and method of operation. Miner teaches that a communication system includes a network control facility, an information distribution network, at least one remote interface unit and at least one communication device associated with and operably coupled to each remote interface unit. [Miner, col. 3, lines 62-66] Miner defines the remote interface unit as either a cable modem or a wireless modem. [Miner, col. 4, lines 29-30] *Miner does not teach a broadcast receiver with tuning capabilities.* Miner teaches that each remote interface operates in a low-power standby mode and a high-power, active mode. [Miner, col. 4, lines 7-9] Miner teaches that the network control facility communicates special information, such as a wake-up command on a secondary downstream channel to the remote interface unit. [Miner, col. 4, lines 13-17] As taught by Miner, the wake-up command instructs the remote interface unit to transition from standby mode to active mode in order to receive user or control information over the primary downstream channel. [Miner, col. 4, lines 17-20] *Miner does not teach an update sensor which operates a **wake-up switch** in direct response to a **wake-up instruction** within a broadcast receiver.*

There is no hint, teaching or suggestion to warrant the combination of Nakatsuyama, Kawaguchi and Miner. As discussed above, Nakatsuyama teaches sending preselected user-specific information to a user's personal receiver. [Nakatsuyama, col. 2, lines 3-11] Kawaguchi contrarily teaches a digital television broadcasting system which transmits a transport stream to receivers. [Kawaguchi, col. 2, lines 11-13] Miner teaches controlling a remote interface unit, defined as either a cable modem or a wireless modem. [Miner, col. 4, lines 29-30] Accordingly, there is no hint, teaching or suggestion to warrant the combination of the user-specific transmission of Nakatsuyama with the digital television broadcasting system of Kawaguchi. Further, there is no hint, teaching or suggestion to warrant the combination of the broadcasting systems of Nakatsuyama and Kawaguchi with the cable modem system of Miner. It is simply not permissible to conclude that this is an obvious combination without a hint, teaching or suggestion to warrant the combination.

It is well settled that to establish a *prima facie* case of obviousness, three basic criteria must be met:

1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2) there must be a reasonable expectation of success; and
3) the prior art reference, or references, must teach or suggest all the claim limitations. MPEP § 2143.

The burden of establishing a *prima facie* case of obviousness based on the teachings of Nakatsuyama, Kawaguchi and Miner has not been met within the Office Action.

Within the Office Action, the motivation that is cited to justify the combination of Nakatsuyama, Kawaguchi and Miner is to utilize the transmission scheme and wake up commands of Miner for the advantages of lower power consumption and reducing the amount of bandwidth needed for control commands via the primary downstream channel. This is the result of the combination, which is an improper basis for justifying the combination. In order to be proper, as stated within section 2143 of the MPEP, quoted above, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." Here, within the Nakatsuyama, Kawaguchi or Miner references, there is no suggestion or motivation within the references themselves to warrant their combination. Further, there is no suggestion or motivation in the knowledge that was generally available to one of ordinary skill in the art to combine the references. By justifying the combination with the result

of the combination, this result being the advantages of the presently claimed invention, it is clear that the combination of Nakatsuyama, Kawaguchi and Miner has been based on hindsight. Only with the presently claimed invention as a template would one find the "motivation" or result provided within the Office Action. Accordingly, the combination of Nakatsuyama with Kawaguchi and Miner is improper.

Furthermore, "[t]he test for an implicit showing [of a teaching, suggestion or motivation] is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370 (Fed. Cir. 2000). Moreover, "particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." Kotzab at 1371.

In Kotzab, the claims focused on an injection molding method using a single temperature sensor to control a plurality of flow control valves. The reference taught a multizone device having multiple sensors, each of which controlled an associated flow control valve, and also taught that one system may be used to control a number of valves. The court found there was insufficient evidence to show that one sensor was the same as one system. Although the control of multiple valves by a single sensor rather than by multiple sensors was a "technologically simple concept," there was no finding "as to the specific understanding or principle within the knowledge of the skilled artisan" that would have provided the motivation to use a single sensor as the system to control more than one valve. Kotzab at 1371.

In the present case, as in Kotzab, there are no showings of particular findings that a skilled artisan, with no knowledge of the claimed invention, would have selected the components from Nakatsuyama, Kawaguchi and Miner for combination in the manner claimed. As discussed above, Nakatsuyama teaches sending preselected user-specific information to a user's personal receiver. Kawaguchi teaches a digital television broadcasting system, not a receiver, which transmits a transport stream to receivers. Miner teaches controlling a remote interface unit, defined as either a cable modem or a wireless modem. This is comparable to the court in Kotzab rejecting the argument that one sensor was the same as one system and stating that there was no finding as to a specific understanding or principle that would have provided the motivation to use a single sensor as a system to control more than one valve. The court did not allow a system to be interchanged with a sensor nor should within the present case, a broadcast system be interchanged with a receiver or a cable modem. To conclude that this is obvious based on the teachings of these references is to use hindsight based on the teachings of the present invention and to read much more into Nakatsuyama, Kawaguchi and Miner than their actual teachings.

Within the Response to Arguments section of the Office Action, it is argued that the motivation to combine is that Kawaguchi teaches the use of a receiver that ensures the reception of program information and any irregular program, while saving the power consumption in the receiver. This does not establish the requisite *prima facie* case to warrant the combination of Kawaguchi with Nakatsuyama. Again, this merely shows the result of the combination. The only motivation for this improper combination is using the presently claimed invention as a template. This is therefore not a proper combination.

There is no motivation to combine the teachings of Nakatsuyama, Kawaguchi and Miner. As discussed above, Nakatsuyama teaches sending preselected user-specific information to a user's personal receiver. Kawaguchi teaches a digital television broadcasting system which transmits a transport stream to receivers. Miner teaches controlling a remote interface unit, defined as either a cable modem or a wireless modem. A person skilled in the art would have no motivation to combine the teachings of Miner with the teachings of Nakatsuyama and Kawaguchi. Accordingly, the rejection of Claims 1, 2, 4-9, 11 and 13-15 based on the combination of Nakatsuyama, Kawaguchi and Miner, is not proper and should be withdrawn.

Even if considered proper, the combination of Nakatsuyama, Kawaguchi and Miner does not teach a low-power broadcast receiver which includes a wake-up sensor and a wake-up switch as claimed within the present claims. As described above, Nakatsuyama does not teach a wake-up sensor which sends a wake-up signal to a wake-up switch in direct response to a first selected signal. Kawaguchi teaches a digital television broadcasting system. On page 5 of the Office Action, as related to Claim 1, Kawaguchi is cited for having a wake-up switch to receive a wake-up signal and closing the wake-up switch in response to receiving the wake-up signal.

Claims 1 and 8 are specifically directed to "a wake-up sensor having a sensor input terminal coupled to the interface circuit input terminal and a wake-up sensor output terminal, wherein the wake-up sensor produces a wake-up signal on the wake-up sensor output terminal directly in response to receiving a first selected signal" (emphasis added). As recognized within the Office Action, the combination of Nakatsuyama and Kawaguchi fail to disclose the use of a wake up signal in direct response to a first selected signal. Miner appears to be cited for this purpose. However, as described above, Miner teaches controlling a remote interface unit, defined as either a cable modem or a wireless modem. Miner does not teach a wake-up sensor which sends a wake-up signal to a wake-up switch in direct response to a first selected signal.

In contrast to the teachings of Nakatsuyama, Kawaguchi, Miner and their combination, the low-power broadcast receiver of the presently claimed invention is directed to a broadcast receiver capable of operating in a power-saving standby mode while retaining the ability to

receive broadcast program, software and firmware updates. The receiver has a broadcast interface that incorporates an update sensor adapted to sense broadcast updates. The receiver includes a wake-up switch that deprives the most power hungry circuits of power in the standby mode. The update sensor, remains active at all times. If the receiver receives a wake-up instruction in the standby mode, then the update sensor closes the wake-up switch to provide power to those components needed to receive the update. *As described above, neither Nakatsuyama, Kawaguchi, Miner nor their combination teach a wake-up sensor which sends a wake-up signal* ***to a wake-up switch*** *in direct response to a first selected signal.*

Within the Response to Arguments section of the Office Action, it is argued that one cannot show nonobviousness by attaching references individually when the rejections are based on combinations of references. The Applicants have not attacked the references individually. The Applicants have shown that none of the references individually teach a wake-up sensor which sends a wake-up signal to a wake-up switch in direct response to a first selected signal. Logically, if none of the references individually teach this element then the improper combination of the references cannot teach this element.

The independent Claim 1 is directed to a broadcast receiver. The broadcast receiver of Claim 1 comprises a power supply having a power-supply output terminal and a broadcast interface circuit. The broadcast interface circuit includes an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals, each signal modulated about a selected carrier frequency, a tuner having a tuner input terminal coupled to the interface circuit input terminal, wherein the tuner selects one of the signals and provides the selected signal on a tuner output terminal, a wake-up sensor having a sensor input terminal coupled to the interface circuit input terminal and a wake-up sensor output terminal, wherein the wake-up sensor produces a wake-up signal on the wake-up sensor output terminal directly in response to receiving a first selected signal and a wake-up switch having a wake-up switch input terminal coupled to the power-supply output terminal, a wake-up switch output terminal, and a wake-up switch control terminal coupled to the wake-up sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal. As described above, the combination of Nakatsuyam, Kawaguchi, and Miner is improper. As also described above, neither Nakatsuyama, Kawaguchi, Miner nor their combination teach a wake-up sensor which sends a wake-up signal **to a wake-up switch** in direct

response to a first selected signal. For at least these reasons, the independent Claim 1 is allowable over Nakatsuyama, Kawaguchi, Miner and their combination.

Claims 2 and 4-7 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Nakatsuyama, Kawaguchi, Miner and their combination. Accordingly, Claims 2 and 4-7 are all also allowable as being dependent on an allowable base claim.

The independent Claim 8 is directed to a broadcast communication network. The broadcast communication network of Claim 8 comprises a broadcast head-end adapted to broadcast a plurality of signals about a corresponding plurality of carrier frequencies, the signals including an occasional wake-up instruction and a plurality of receivers adapted to receive the plurality of signals. It is specified in Claim 8 that each receiver includes a power supply having a power-supply output terminal and a broadcast interface circuit. The broadcast interface circuit includes an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals, each signal modulated about a selected carrier frequency, a wake-up sensor having a sensor input terminal coupled to the interface circuit input terminal and a wake-up sensor output terminal, wherein the wake-up sensor produces a wake-up signal on the wake-up sensor output terminal directly in response to receiving a first selected signal and a wake-up switch having a wake-up switch input terminal coupled to the power-supply output terminal, a wake-up switch output terminal, and a wake-up switch control terminal coupled to the wake-up sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal. As described above, the combination of Nakatsuyam, Kawaguchi, and Miner is improper. As also described above, neither Nakatsuyama, Kawaguchi, Miner nor their combination teach a wake-up sensor which sends a wake-up signal **to a wake-up switch** in direct response to a first selected signal. For at least these reasons, the independent Claim 8 is allowable over Nakatsuyama, Kawaguchi, Miner and their combination.

Claims 9, 11 and 13-15 are all dependent on the independent Claim 8. As described above, the independent Claim 8 is allowable over the teachings of Nakatsuyama, Kawaguchi, Miner and their combination. Accordingly, Claims 9, 11 and 13-15 are all also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 16 and 18-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi in view of U.S. Patent No. 6,054,981 to Kimoto et al. (hereinafter "Kimoto") and Miner. It is recognized within the Office Action that Kawaguchi

does not teach an indicator for indicating various power modes. Kimoto appears to be cited for this proposition. However, as described above, *Kawaguchi does not teach a power mode in which* ***the controller*** *is powered off. Kawaguchi also does not teach a transition from one power mode to another power mode in which the controller is powered on in direct response to a wake-up instruction.* Instead, Kawaguchi teaches that the controller 225 is always powered on. As described above, Miner teaches controlling a remote interface unit, defined as either a cable modem or a wireless modem. Miner teaches receiving user information and control information to the remote interface unit when the remote interface unit *is in active mode. Miner does not teach providing power to a control processor and indicating a standby condition for the receiver while receiving a receiver update, in direct response to receiving the wake-up instruction.* Accordingly, neither Kawaguchi, Kimoto, Miner nor their combination teach providing power to a control processor and indicating a standby condition for the receiver while receiving a receiver update, in direct response to receiving a wake-up instruction.

The independent Claim 16 is directed to a method of reducing power usage in a broadcast receiver. The method of Claim 16 comprises monitoring, in a standby mode, a user-input device for a power-on instruction, indicating a power-on condition for the receiver in response to the power-on instruction, monitoring the user-input device for a power-off instruction, indicating a standby condition for the receiver in response to the power-off instruction, monitoring, with the receiver in the standby condition, a broadcast communication channel for a wake-up instruction and providing power to a first portion including a control processor of the receiver and indicating a standby condition for the receiver while receiving a receiver update, **in direct response** to receiving the wake-up instruction. As described above, neither Kawaguchi, Kimoto, Miner nor their combination teach providing power to a control processor and indicating a standby condition for the receiver while receiving a receiver update, in direct response to receiving a wake-up instruction. For at least these reasons, the independent Claim 16 is allowable over the teachings of Kawaguchi, Kimoto, Miner and their combination.

Claims 18-20 are all dependent on the independent Claim 16. As described above, the independent Claim 16 is allowable over the teachings of Kawaguchi, Kimoto, Miner and their combination. Accordingly, Claims 18-20 are all also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 3, 10 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi in view of Kimoto and further in view of U.S. Patent Publication No. 2002/0073423 to Krakirian. Claim 3 is dependent on the independent Claim 1. Claims 10 and 12 are both dependent on the independent Claim 8. As described above,

the independent Claims 1 and 8 are both allowable over the teachings of Nakatsuyama, Kawaguchi, Miner and their combination. Accordingly, Claims 3, 10 and 12 are all also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 21 and 23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawaguchi in view of Miner. The applicants respectfully disagree. For all of the reasons discussed above, the combination of Kawaguchi and Miner is improper. Further, even if considered proper, the combination of Kawaguchi and Miner does not teach the broadcast receiver as claimed in Claims 21 and 23.

As described above, Kawaguchi teaches a digital television broadcasting system. Kawaguchi teaches that a broadcasting system 1 includes a digital TV transmitter 2 for transmitting a transport stream from a satellite space station 3 to a multiplicity of digital TV receivers 4. [Kawaguchi, col. 3, lines 30-43, Figure 1] Kawaguchi also teaches a second transmission media 5 other than the satellite 3 to inform the TV receivers 4 of irregular broadcasts. [Kawaguchi, col. 3, lines 30-43, Figure 1] Kawaguchi teaches that the second transmission media 5 may be any transmission media which is other than the broadcasting satellite 3 and which causes the power consumption in each TV receiver 4 during waiting for a communication from the earth station 2 to be less than the power consumption in each TV receiver 4 during receiving the program information without using program contents. [Kawaguchi, col. 3, lines 43-50] Kawaguchi teaches maintaining an alteration time list 340 and at each TV receiver 4, an update time list. [Kawaguchi, col. 7, lines 6-23] Kawaguchi teaches that at the update time, the switch 231 is turned on. [Kawaguchi, col. 7, lines 24-39, Figure 7A] *Kawaguchi does not teach a means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition.* Instead, Kawaguchi teaches that the switch 231 is turned on at the update time, not in direct response to a wake-up signal.

Miner is directed to a low-powered communication system and method of operation. Miner teaches that a communication system includes a network control facility, an information distribution network, at least one remote interface unit and at least one communication device associated with and operably coupled to each remote interface unit. [Miner, col. 3, lines 62-66] Miner defines the remote interface unit as either a cable modem or a wireless modem. [Miner, col. 4, lines 29-30] *Miner does not teach a broadcast receiver with tuning capabilities.* Miner teaches that each remote interface operates in a low-power standby mode and a high-power, active mode. [Miner, col. 4, lines 7-9] Miner teaches that the network control facility communicates special information, such as a wake-up command on a secondary downstream channel to the remote interface unit. [Miner, col. 4, lines 13-17] As taught by Miner, the wake-up

command instructs the remote interface unit to transition from standby mode to active mode in order to receive user or control information over the primary downstream channel. [Miner, col. 4, lines 17-20] *Miner does not teach a means for monitoring the broadcast communication channel which includes a power switch for providing power to a control processor in direct response to the wake-up instruction.*

In contrast to the teachings of Kawaguchi, Miner and their combination, the low-power broadcast receiver of the presently claimed invention is directed to a broadcast receiver capable of operating in a power-saving standby mode while retaining the ability to receive broadcast program, software and firmware updates. The receiver has a broadcast interface that incorporates an update sensor adapted to sense broadcast updates. The receiver includes a wake-up switch that deprives the most power hungry circuits of power in the standby mode. The update sensor, remains active at all times. If the receiver receives a wake-up instruction in the standby mode, then the update sensor closes the wake-up switch to provide power to those components needed to receive the update. *As described above, neither Kawaguchi, Miner nor their combination teach a means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition, wherein the means for monitoring the broadcast communication channel includes a power switch for providing power to a control processor in direct response to the wake-up instruction.*

The independent Claim 21 is directed to a broadcast receiver. The broadcast receiver of Claim 21 comprises means for monitoring a user-input device for a power-on instruction, display means for indicating a power-on condition for the receiver in response to the power-on instruction, means for monitoring the user-input device for a power-off instruction, means responsive to the power-off instruction for indicating a power-off condition for the receiver and means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition, wherein the means for monitoring the broadcast communication channel includes a power switch for providing power to a control processor in direct response to the wake-up instruction. *As described above, neither Kawaguchi, Miner nor their combination teach a means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition, wherein the means for monitoring the broadcast communication channel includes a power switch for providing power to a control processor in direct response to the wake-up instruction.* For at least these reasons, the independent Claim 21 is allowable over the teachings of Kawaguchi, Miner and their combination.

Claim 23 is dependent on the independent Claim 21. As described above, the independent Claim 21 is allowable over the teachings of Kawaguchi, Miner and their combination. Accordingly, Claim 23 is also allowable as being dependent on an allowable base claim.

For the reasons given above, the applicant respectfully submits that the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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